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ABSTRACT

A dental assisting instructor was provided with 250 hours of released time to develop stardardized Learning Activity Packets (LAPs) for the Dental Assisting program at the Bellingham (Washington) Vocational Technical Institute. The instructor reviewed unit objectives, gathered input from local dental professionals, reviewed reference materials, and studied occupational analyses in order to develop nine LAPs. The LAPs were approved and were preferred by faculty and students over other modules in use. The nine LAPs included in this report cover the following topics: oral pathology, oral anatomy, taking medical/dental histories, tooth morphology, temporary crowns and restorations, pedodontics, monitoring nitrous oxide and oxygen, identifying and interpreting radiographs for mounting, radiology--intraoral radiographic procedures, and radiology--the periapical and bitewing examination. Each LAP consists of a goal, rationale for learning, prerequisites, estimated completion time, references, audiovisuals, requirements for completion, vocabulary, objectives, and practice activities. LAPs are illustrated with line drawings. (KC)

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WA 8413304

CURRICULUM DEVELOPMENT OF LEARNING ACTIVITY PACKETS, DENTAL ASSISTING PROGRAM

FINAL REPORT

Project No. 84-ATF(175)NB

Curriculum Development Project
Conducted Under Public Law 94-482

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Research Coordinating Unit
WASHINGTON STATE COMMISSION FOR VOCATIONAL EDUCATION
OLYMPIA, WASHINGTON 98504

FINAL REPORT

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Title of Project

"Curriculum Development of Learning Activity Packets,

Dental Assisting Program"

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The project reported herein was performed pursuant to a grant from the Research Coordinating Unit of the Washington State Commission for Vocational Education. Contractors undertaking such projects under the Commission for Vocational Education sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Commission for Vocational Education position or policy.

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October 29, 1984

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SUMMARY OF PROJECT

Major Objective of the Project:

To provide a Dental Assisting instructor with release time to revise and/or develop standardized Learning Activity Packets (LAPs) for all the Dental Assisting curriculum not in Dental Auxiliary Education modules.

Summary of Activities:

Ms. Kathleen Schacht, C.D.A., dental assisting instructor was provided 250 hours of release time to develop nine LAPs. To begin the project, Ms. Schacht reviewed all of the unit objectives and sent copies to local dental professionals for suggestions for additions or deletions in the content. Reference materials, i.e., current texts, A-Vs, and journals were purchased for use in the curriculum development. Occupational analyses were obtained to add further direction in writing the new objectives. The objectives for each LAP were written to include critical content as identified by the occupational analysis, local dental professional input, national dental assisting standards and current literature. The other components of the LAP were then written to provide the student with additional direction and activities to apply the theory, i.e., vocabulary lists, practice activities, A-Vs, demonstrations, evaluations, and bibliography.

The Dental Assisting Advisory Committee reviewed and approved the completed LAPs.

Summary of Results:

Titles of Learning Activity Packets completed:

- Oral Pathology
- Oral Anatomy: Oral Embryology and Histology
- Take and Record Medical/Dental History
- Tooth Morphology
- Temporary Crowns and Restorations
- Pedodontics
- Monitoring Nitrous Oxide and Oxygen
- Identify and Interpret Radiographs for Mounting
- Radiology: Intraoral Radiographic Procedures
- Radiology: The Periapical and Bitewing Examination

Two LAPs were not completed due to the fact that the money for release time was used up. The instructors are currently working on developing these LAPs.

The overall conclusion is that the LAPs are preferred by the students and faculty because the content is well defined and provides immediate, pertinent, and meaningful application of the theory.

In 1981, the Dental Assisting program implemented an individualized self-paced curriculum. A portion of the curriculum was Dental Education Auxiliary Modules (DAE) prepared at the University of Washington with a grant from the W. K. Kellogg Foundation. The remainder of the curriculum was prepared by three instructors using their own formats.

The dental assisting program was evaluated for national accreditation by the American Dental Association Commission on Dental Accreditation in 1982. Conditional approval was granted at that time with recommendations for program improvement. The Commission recommended that instructional modules be prepared for the curriculum not in DAE modules using a standardized format.

The faculty has a full-time teaching load of thirty hours per week for eleven months. This does not provide any time for major curriculum development. The monies received were used to provide an instructor 250 hours of released time for this project.

The following project objectives were completed in July 1984 with the exception of two LAPs and the evaluation tools:

(1) To revise and/or develop LAPs for all the Dental Assisting program not in DAE modules, using a standardized format by July 1984.

(2) To provide standardization, continuity and clarity of individualized instruction for the student by identifying directions for use, specific goals and objectives, learning activities, A-Vs, references, and evaluation tools for each LAP.

(3) The project will begin January 1984 and will continue through August 1984.

Evaluation of the project was done by the advisory committee and student questionnaire. The following is a summary of the success of the LAPs as stated by the advisory committee, faculty, and students.

The LAPs reflect current practices and theory in dental assisting. It is a very organized format and provides continuity for the students and instructors. It provides immediate application of theory through practice activities. The students and faculty prefer the LAPs to the other modules in use.

Recommendations for the future are to obtain further monies to provide more release time to revise and/or develop additional practice activities, evaluation checklists, and written examinations that correspond to the LAP objectives. Also, current periodicals need to be reviewed to add to the bibliography.

The LAPs will be disseminated through ERIC and upon request from other dental assisting programs.

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: ORAL PATHOLOGY

GOAL: To describe and identify body defenses, oral lesions, disturbances in dental development, diseases of the oral soft tissues, and oral manifestations of nutritional disorders.

RATIONALE FOR LEARNING: The role of an expanded functions auxiliary is to recognize deviations from the norm in the patient's mouth. All auxiliaries involved in direct patient care must have this skill to protect themselves from exposure to pathogenic microorganisms.

PRE-REQUISITES:

ESTIMATED COMPLETION TIME: Didactic: 5 hours
Lab: 5 hours

REFERENCES: Modern Dental Assisting, Torres & Ehrlich, 1980
Chapter 13, pages 250-273

AUDIOVISUALS: BVTI Slide Series, Oral Pathology
Oral Pathology Learning Program, Pullon, Miller

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research of LAP Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1-9	_____
D. View filmstrip/tape: Oral Pathology, Lesson 2: Inflammation	_____
E. Participate in Group Discussion Objectives	_____
F. View filmstrip/tape: Oral Pathology, Lesson 5: Disturbances of Oral and Para-Oral Structures	_____
G. View BVTI Slide Series, Section 1	_____

		Completion Date
H.	Participate in Group Discussion, Objectives 14-16	_____
I.	View BVTI Slide Series, Section 2	_____
J.	View filmstrip/tape: Oral Pathology, Lesson 8, Diseases of Oral Pulp and Periapical Disease; Lesson 9, Periodontal Disease, part 1; Lesson 10, Periodontal Disease, part 2	_____
K.	Participate in Group Discussion, Objectives 17-20	_____
L.	View BVTI Slide Series, Section 3	_____
M.	View filmstrip/tape: Oral Pathology, Lesson 3, Disturbances of Growth and Neoplasia, and Lesson 11, Infectious Diseases	_____
N.	Participate in Group Discussion, Objectives 20, 21	_____

PA B: VOCABULARY LIST

Directions: Research each word listed below using text, Modern Dental Assisting, Torres & Ehrlich

VOCABULARY

1. disease
2. symptom
3. syndrome
4. etiology
5. idiopathic
6. degeneration
7. hypoplasia
8. hyperplasia
9. hypertrophy
10. neoplasia
11. metastasis
12. edema
13. fistula
14. hyperemia
15. hypertrophy
16. hypoplasia
17. keratosis
18. necrosis
19. pulp polyp
20. secondary infection
21. neoplasm
22. antihistamine
23. antigen
24. virulence

OBJECTIVES:

1. Define the work pathology and give a specific example.

2. Identify the role of a dental auxiliary in relationship to pathology when providing direct patient care.

3. Explain how natural barriers (nasal passages, eyes, mouth) prevent bacteria from entering the body.

4. Identify the role of antigens, antibodies, and immunity in relationship to body defense against bacteria.

5. Define inflammation and its function.

6. List the four major signs of inflammation.

7. Describe the difference between generalized and localized inflammation, including examples of each.

8. Explain what happens clinically to a patient who experiences inflammation with a severe toothache.

9. Identify the process that occurs when tissue repairs itself following an injury.

PRACTICE ACTIVITY C: Participate in group discussion, Objectives 1-9

PRACTICE ACTIVITY D: After discussion, view filmstrip/tape, Lesson 2: The Inflammatory Process.

10. Describe the classifications of lesions, including an example of each.

11. Explain the types of disturbances in dental development (variation in number, size, and form).

12. List and describe the various disturbances in tooth formation.

13. Describe the following anamolies of eruption:
    a. premature/delayed eruption
    b. impaction
    c. ankylosis
    d. attrition
    e. abrasion
    f. erosion
    g. abnormal resorption

PRACTICE ACTIVITY E: Participate in group discussion, Objectives 10-13

PRACTICE ACTIVITY F: After discussion, view filmstrip/tape, Lesson 5: Disturbances of Oral and Para-Oral Structures

PRACTICE ACTIVITY G: View BVTI Slide Series, Section 1

14. Describe progression of dental caries (i.e., initiation and prerequisites, sheltered areas and formation, rate of destruction and direction growth).

15. Explain the diseases of the pulp (hyperemia, pulpitis and periapical abcess), including origin and sensations of each.

16. Describe the following diseases of the oral soft tissues (cause, appearance, treatment):
    a. gingivitis
    b. pregnancy gingivitis
    c. periodontitis
    d. periodontal pocket
    e. periodontal abscess
    f. bone loss
    g. furcation involvement
    h. pericornitis
    i. necrotizing ulcerative gingivitis

PRACTICE ACTIVITY H: Participate in Group Discussion, Objectives 14-16

PRACTICE ACTIVITY I: View BVTI Slide Series, Section 2

PRACTICE ACTIVITY J: View filmstrip/tape, Lesson 8, Diseases of Oral Pulp and Periapical Disease; Lesson 9, Periodontal Disease, part 1; and Lesson 10, Periodontal Disease, part 2

17. Describe the following diseases of the oral soft tissues (cause, appearance, treatment):
    a. leukoplakia
    b. moniliasis
    c. herpes simplex (including significance to dental team members)
    d. herpes simplex 2 (including significance to dental team members)
    e. aphthous ulcer
    f. cellulitis
    g. cheilosis
    h. black hairy tongue
    i. geographic tongue

18. Identify the following types of oral cancer, including the frequency of occurence and location:
    a. squamous cell carcinoma
    b. adenocarcinoma
    c. malignant tumors of the jaw

19. Describe the dental implications of radiation treatment and chemotherapy.

20. Identify the predisposing factors of oral cancer.

PRACTICE ACTIVITY K: Participate in Group Discussion, Objectives 17-20.

PRACTICE ACTIVITY L: View BVTI Slide Series, Section 3

PRACTICE ACTIVITY M: View filmstrip/tape, Lesson 3, Disturbances of Growth and Neoplasia; and Lesson 11, Infectious Diseases

21. Describe the following secondary oral disorders, including the cause, appearance/sensations, and treatment (where applicable):
    a. mumps
    b. tetanus
    c. pernicious anemia

d. leukemia
e. tuberculosis
f. hepatitis

22. Explain the appearance of the following oral conditions caused by nutritional disorders:
a. angular stomatitis/cheilosis
b. pellegra
c. scurvy
d. rickets

PRACTICE ACTIVITY N: Participate in Group Discussion, Objectives 20 and 21.

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: ORAL ANATOMY: ORAL EMBRYOLOGY AND HISTOLOGY

GOAL: To view tissue differentiation, embryonic development of the face and oral cavity including factors influencing development, the life cycle of a tooth, and the anatomic parts of a tooth and the periodontium.

RATIONALE FOR LEARNING: Basic comprehension of oral embryology and histology is necessary when learning the types of teeth, archs and anatomical features and surfaces of teeth. Effective problem-solve skills are necessary when charting a patient, in addition to providing, patient consultations based on concerns regarding tooth development.

PRE-REQUISITES:

ESTIMATED COMPLETION TIME: Didactic: 3 hours
Lab: 3 hours

REFERENCES: Modern Dental Assisting, Torres & Ehrlich
Chapter 10, pages 169-201

AUDIOVISUALS:

REQUIREMENTS FOR COMPLETION:

		Completion Date
A.	Research of LAP Objectives	_____
B.	Research Vocabulary List	_____
C.	Participate in Group Discussion, Objectives 1-16	_____
D.	Complete label activity on the periodontal ligaments and section of mandibular molar	_____
E.	Participate in Group Discussion, Objectives 17-	_____

OBJECTIVES:

1. Describe the embryonic and fetal phase of development.
2. Identify what happens to cells once fertilization occurs.
3. Explain the three primary embryonic layers that result from redistribution of cells, including differentiation of each.
4. Describe the embryonic development of the branchial arches of a four-week old fetus.
5. Identify the facial development of a fetus from four to eight weeks of age.
6. Explain the process and function of each step of palatal development, including the primary palate, palative processes, and secondary palate.
7. Explain the development of teeth in a human embryo, including location and duration.
8. Explain factors which alter prenatal dental development, including examples and clinical effects of each.
9. Describe how the maxillae and mandible growth alters the original shape of each, including cause and clinical effect.
10. List the three developmental processes during formation of a tooth.
11. Explain the progression of the following stages of tooth development:
    initiation
    proliferation
    histodifferentiation
    morphodifferentiation
    apposition
    calcification
    eruption
    attrition

    including cause and clinical appearance of deviations from the norm of each stage.
12. Identify the following anatomical parts of a tooth, including the structure and function of each:
    enamel
    dentin
    pulp
13. Identify disorders and pulp, including clinical appearance of each.
14. Describe the functions of "attachment apparatus" of a tooth.
15. Explain the structure and function of cementum.
16. Explain the structure and function of the periodontal ligament, including the groups of principle fiber bundles.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-16

PRACTICE ACTIVITY D: Complete label activity on periodontal ligaments and mandibular molar section

17. Explain the disorders of the enamel, pulp, cementum, and periodontal ligament, including the cause and treatment of each.

18. Identify the function and the stimulation for the production of the alveolar process.

19. List and explain the function of the components of the alveolar process.

20. Explain the location, surface color, texture, elasticity and keritinization of masticatory and lining mucosa.

21. Describe the characteristics of normal gingival tissue.

22. Identify the location and appearance of the following supporting tissues:
    a. epithelial attachment
    b. free gingiva
    c. gingival sulcus
    d. gingival margin
    e. free gingival groove
    f. gingival papilla
    g. interdental papilla
    h. attached gingiva
    i. alveolar mucosa
    j. incisive papilla
    k. palatine raphe
    l. palatine rugae

PRACTICE ACTIVITY E: Participate in Group Discussion, Objectives 17-22

PRACTICE ACTIVITY F: Complete label activity on the supporting tissues.

PA B: VOCABULARY LIST

Directions: Research each listed below using test, Modern Dental Assisting, Torres and Ehrlich

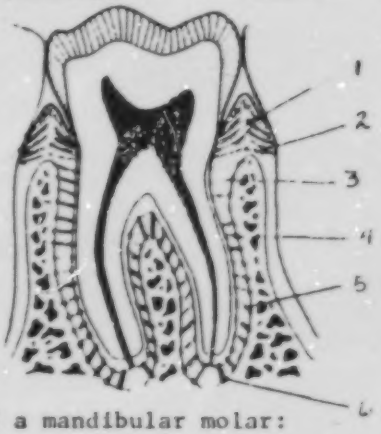
1. amelogenesis imperfecta
2. ankylosis
3. attrition
4. bruxism
5. calcification
6. dentinal tubules
7. Hunter-Schreger Bands
8. ectoderm
9. enamel lamellae
10. sclerotic dentin
11. bifurcation
12. attachment apparatus
13. cleft palate
14. coalesce
15. dead tracts

PA D

Directions: Label the following structures using word banks provided:

1. Parts of the principle fibers of the periodontal ligament:

1._____
2._____
3._____
4._____
5._____
6._____

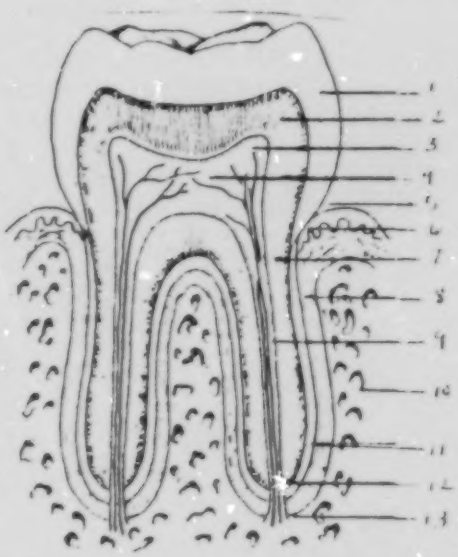


Word Bank

oblique fibers
transeptal fibers
apical fibers
gingival fibers
alveolar crest fibers
horizontal fibers

2. Longitudinal section of a mandibular molar:

1._____
2._____
3._____
4._____
5._____
6._____
7._____
8._____
9._____
10._____
11._____
12._____
13._____



Word Bank

cementum
pulp canals
dentin
pulp chamber
alveolar bone lining the socket(lamina dura)
apical foramen
sulcus
enamel
epithelial attachment
blood vessels and nerves
pulp horns
periodontal ligament
dentin

PA F

Directions: Label the following using word banks provided:

1. Parts of the supporting tissues:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Word Bank

alveolar mucosa
free gingival groove
margin of gingiva
attached gingiva(stippled)
free gingiva
mucogingival border

BELLINGHAM VOCATIONAL-TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: TAKE AND RECORD MEDICAL/DENTAL HISTORY

GOAL: To effectively take and record and utilize a complete medical/dental history using a combination of patient filled out questionnaire and interview.

RATIONALE FOR LEARNING: Each dental patient has a unique medical and dental history. Understanding and identifying medical and dental alerts is necessary to effectively treat dental patients and prevent occurrence of emergencies.

PRE-REQUISITES:
Block 1 & 2
Oral Pathology
Pharmacology
Psychology

ESTIMATED TIME FOR COMPLETION:
Didactic: 3 hours
Lab: 3 hours

REFERENCES:
Clinical Practice of the Dental Hygienist, Wilkins, 1976, 1983 Chapter 6, pg. 63
Medical Emergencies in the Dental Office, Malamed, 1982 Chapter 2, pg. 8
Health Questionnaire Sample and Rationale Handout, University of Washington, Dental School, 1982

AUDIOVISUALS: None

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research of LAP Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1-10.	_____
D. Clinic Observation: Make an appointment through instructor to observe a clinic student obtaining/reviewing a medical dental history from a clinic patient. Discuss observation in a group setting.	_____
E. Participate in Group Discussion, Objectives 11-13.	_____
F. Observe Clinical Demonstration	_____

LAP: TAKE AND RECORD MEDICAL/DENTAL HISTORY

REQUIREMENTS FOR COMPLETION:	Completion Date
G. Obtain 3 medical/dental histories from peers in a clinic setting, with instructor check-off	_____
H. Complete Clinical Evaluation in Dental Clinic as chairside assistant, 90%	_____
I. Written Exam, 90%	_____

LAP: TAKE AND RECORD MEDICAL/DENTAL HISTORY

OBJECTIVES:

1. Explain the significance of diseases referred to on the medical/dental history as related to dentistry.

2. Explain the additional information needed if the patient responds "yes" to any of the questions on the health history (e.g., duration of condition, onset, etc.).

3. Explain how dental office emergencies can be prevented by proper utilization of the medical/dental history.

4. Explain the significance of specific drug allergies on oral health and the delivery of oral care (e.g., local anesthesia, iodine, antibiotics, etc.).

5. Explain the significance of specific drugs on oral health and the delivery of oral care (e.g., oral contraceptives, anti-coagulants, etc.).

6. Explain the techniques used in patient interviews to do the following (give examples of how to perform each):

   a. establish rapport
   b. obtain specific information
   c. obtain general information
   d. support the patient's narrative
   e. challenge the patient's report
   f. change the subject of the interview
   g. open the interview, and
   h. close the interview

7. List the components and explain the function of each for the armamentarium required to perform this procedure.

8. List and explain the advantages and disadvantages of the following methods of taking a medical/dental history:

   a. patient filled-out questionnaire
   b. personal interview, and
   c. combination of the two

9. Explain the rationale for taking a medical/dental history and for reviewing at each appointment.

PRACTICE ACTIVITY C: Participate in group discussion, Objectives 1-11.

PRACTICE ACTIVITY D: Complete Clinic Observation: Make an appointment through instructor to observe a clinic student obtaining and reviewing a medical/dental history from a clinic patient. Discuss observation in a group setting.

LAP: TAKE AND RECORD MEDICAL/DENTAL HISTORY

10. Explain the precautions which must be considered during the procedure including:

    a. being aware of emotional empact of particular questions
    b. the need to perform the procedure in privacy, and
    c. using a prescribed outline for the procedure

11. Explain the practitioner's ethical and legal responsibilities as they relate to this proceudre (e.g., must be in ink, etc.).

12. Explain the information required as a chart entry related to this procedure.

13. Explain maintenance of the treatment area and armamentarium.

PRACTICE ACTIVITY E: Participate in group discussion, Objectives 10-13.

PRACTICE ACTIVITY F: Observe clinical demonstration.

PRACTICE ACTIVITY G: Obtain 3 medical/dental histories from peers in a clinical setting with instructor check-off.

PRACTICE ACTIVITY H: Complete clinical evaluation in dental clinic as chairside assistant, 90%.

PRACTICE ACTIVITY I: Written Exam, 90%.

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: TOOTH MORPHOLOGY

GOAL: To accurately identify the types of teeth, the two dental arches, numbering systems, surfaces and borders of teeth, anatomical features and the physiology of occlusion in the primary and permanent dentition.

RATIONALE FOR LEARNING: It is a primary responsibility of a dental auxiliary to accurately identify individual teeth when performing a wide variety of skills, i.e., chart entries, rubber dam, radiographs, etc. If errors are made, critical results could occur.

ESTIMATED TIME FOR COMPLETION: Didactic: ____ hours
Lab: ____ hours

REFERENCES: Modern Dental Assisting, Torres & Ehrlich
Ch. 11, pgs. 203-234

AUDIOVISUALS: Slide Series, "Atlas of the Mouth"

REQUIREMENTS FOR COMPLETION:

		Completion Date
A.	Research of LAP Objectives	_____
B.	Research Vocabulary List	_____
C.	Participate in Group Discussion, Objectives 1-6	_____
D.	Complete typodont identification Activity #1	_____
E.	Participate in Group Discussion, Objectives 7-13	_____
F.	Complete typodont identification Activity #2	_____
G.	Participate in Group Discussion, Objectives 14-18	_____
H.	View/assess occlusion of typodont and sample study models	_____
I.	Participate in Group Discussion, Objectives 19-23	_____
J.	Complete typodont identification Activity #3	_____

		Completion Date
K.	Participate in Group Discussion, Objectives 24-26	_____
L.	Complete identification activity of large plaster teeth	_____
M.	Complete typodont identification, Activity 94	_____
N.	Complete lab exercise: drawing and carving of two teeth to scale	_____
O.	Exam 90	_____

PA N: LAB EXERCISE
SOAP CARVING

Directions: The student will carve two teeth, maxillary central and a tooth of choice to the size of a typodont tooth adding the apex of the tooth using the criteria below, receiving a score of 30.

NAME _____

SOAP CARVING EVALUATIONS

CRITERIA	TOOTH #1 5	4	3	2	1	COMMENTS	TOOTH #2 5	4	3	2	1	COMMENTS
1. General anatomy												
2. Facial surface												
3. Lingual surface												
4. Mesial surface												
5. Distal surface												
6. Occlusal/incisal												
7. CEJ												
8. Root												
9. Grooves, pits, cusps, ridges												
10. Root to crown												

Criteria

Rating:

5: same as the typodont tooth used as a guide

4: the detail is not defined, but size and shape are present

3: the size is not actual and no details are present

2: rough outline

1: no resemblance

Minimum score: 30/50

SCORE Tooth #1 _____

Tooth #2 _____

LAP: TOOTH MORPHOLOGY

OBJECTIVES:

1. Describe the four classes of teeth, including the general appearance and functions of each.
2. Identify the dental arches including the function and adaptations of each.
3. Explain the arrangement of teeth within an arch.
4. Define, give an example and rationale of an antagonistic relationship.
5. List the four quadrants, including the teeth contained in the primary and permanent dentition.
6. Describe the clinical characteristics of anterior and posterior teeth.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-6

PRACTICE ACTIVITY D: Typodont Activity #1
On a typodont LRQuad, identify: LPQuad, ULQuad, LLQuad; the mesial and distal surfaces of each tooth; antagonistic relationships on the right quadrants; anterior teeth and posterior teeth

7. Identify clinical appearance of overjet and overbite.
8. Compare the occlusal planes of the maxillary and mandibular posterior teeth.
9. Compare and contrast the universal numbering and the two-digit tooth recording system with primary and permanent dentition including advantages and disadvantages of each.
10. Identify the surfaces and borders of teeth, including which teeth each sruface listed is found.
11. Define and give an example of line and point angles.
12. Explain rationale and technique of dividing a tooth into thirds.

PRACTICE ACTIVITY E: Participate in group discussion, Objectives 7-12

PRACTICE ACTIVITY F: Typodont Activity #2, Identify: the occlusal planes; each tooth in permanent dentition, 1-32, and all surfaces of anterior and posterior teeth

13. Identify the general principle and functions of tooth contour.
14. Define and explain the three functions of a "contact point".
15. Define "embrasure", and identify the four directions an embrasure may diverge.
16. Explain occlusal form, including maxillary and mandibular cusp relationships and the functions of this arrangement.

17. Define "occlusion", including clinical position of condyles when in centric occlusion.

18. Identify the five conditions that exist in physiologic occlusion.

PRACTICE ACTIVITY G: Participate in Group Discussion, Objectives 14-18

PRACTICE ACTIVITY H: Viewing occlusion of typodont and sample study models from clinic patients, identify presence labsence of centric and functional occlusion.

19. Describe three important functions of primary teeth.

20. Identify the general progression of development and eruption of primary teeth, including alignment, root formation, spacing, etc.

21. Explain the four specialized characteristics primary teeth have in order to perform their specialized functions.

22. Identify clinical differences between primary and permanent teeth (i.e., relationship, shape and size of primary posterior and anterior teeth and roots).

23. Explain clinical appearance (i.e., occlusal and root form) of each of the following primary teeth:

a. maxillary first molar
b. maxillary second molar
c. mandibular first molar
d. mandibular second molar

PRACTICE ACTIVITY I: Participate in Group Discussion, Objectives 19-23

PRACTICE ACTIVITY J: Typodont Activity 3: On primary typodont, identify each tooth, then compare shape and size of each with a typodont of permanent dentition.

24. Describe the cause and sequence of events that occur during exfoliation (shedding process).

25. Describe the clinical appearance of the crowns and root(s), location, function, arrangement and dimensions of each of the following permanent teeth:

a. max and mand incisors
b. max and mand cuspids
c. max and mand premolars (bicuspids)
d. max and mand first, second, and third molars

PRACTICE ACTIVITY K: Participate in Group Discussion of Objectives 24-26

PRACTICE ACTIVITY L: View each large plaster tooth presented and identify: each number, name, location in mouth and surfaces.

PRACTICE ACTIVITY M: Complete identification timing of random primary and permanent teeth and surfaces meeting criteria listed (attached).

PRACTICE ACTIVITY N: Complete lab exercise: drawing and carving two teeth to scale meeting criteria listed (attached).

PRACTICE ACTIVITY O: View slide series: "Atlas of the Mouth"

NAME _____

LAP: TOOTH MORPHOLOGY

PA B VOCABULARY LIST

Directions: Research each listed word using text, Modern Dental Assisting, Torres & Ehrlich

1. dentition
2. maxillary
3. mandibular
4. primary dentition
5. deciduous dentition
6. succedaneous dentition
7. quadrant
8. midline of the dental arch
9. tooth surface
10. mesial
11. distal
12. proximal
13. interproximal
14. labial
15. buccal
16. facial
17. lingual
18. occlusal
19. incisal edge
20. crown
21. root
22. anatomical crown
23. clinical crown
24. cervix
25. cervical line
26. cementoenamel junction (cej)
27. central
28. lateral
29. cuspid
30. bicuspid
31. premolar
32. molar
33. apex
34. apical
35. enamel
36. cementum
37. dentin
38. cusp
39. bruxism
40. mastication
41. attrition
42. occlusion
43. bifurcation
44. trifurcation

LAP: TOOTH MORPHOLOGY NAME _____

PA D: TYPODONT ACTIVITY #1

Directions: On a typodont, identify the following with 100% accuracy.

	SELF	PEER	INSTRUCTOR
1. URQuad			
2. ULQuad			
3. LLQuad			
4. LRQuad			
5. Mesial surface of each tooth			
6. Distal surface of each tooth			
7. Antagonistic relationships on right and left quads			
8. Antagonistic relationships on anterior teeth			

PEER _____

INSTRUCTOR _____

DATE _____

NAME _____

LAP: TOOTH MORPHOLOGY

PA F: TYPODONT ACTIVITY #2

Directions: On a typodont, name and identify the following with 100% accuracy.

	SELF	PEER	INSTRUCTOR
1. Occlusal planes			
2. Each tooth in permanent dentition (1-32)			
3. All surfaces of anterior and posterior teeth			

PEER _____

INSTRUCTOR _____

DATE _____

LAP: TOOTH MORPHOLOGY NAME _____

PA H: OCCLUSION IDENTIFICATION

PA J: TYPODONT ACTIVITY #3
PRIMARY DENTITION IDENTIFICATION

PA H:

Directions: On three clinic patients' study models and typodont, identify presence/absence of centric and functional occlusion with 100% accuracy.

PATIENT NAME OR CASE #	OCCLUSION	PEER	INSTRUCTOR
1.			
2.			
3.			
4. Typodont			

PA J:

Directions: On a primary typodont, identify each tooth by letter. Then, give verbal description of differences of shape and size of each tooth in comparison with permanent dentition with 100% accuracy.

PRIMARY DENTITION	IDENTIFICATION OF EACH	COMPARISON WITH PERM. DENT.
1. URQuad (A-E)		
2. ULQuad (F-J)		
3. LLQuad (K-O)		
4. LRQuad (P-T)		

PEER _____

INSTRUCTOR _____

DATE _____

LAP: TOOTH MORPHOLOGY NAME _____

PA L: PLASTER TOOTH IDENTIFICATION

Directions: View each plaster tooth presented and identify: number, name, location in mouth and surfaces with _____ accuracy.

	NAME OF TOOTH	#	LOCATION	SURFACES THAT EXIST
example:	Max R 2nd B	4	URQuad	M, D, B, L
example:	Max R cent	8	URQuad	M, D, F, L
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

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DENTAL ASSISTING

NAME _____

DATE _____

LAP: TOOTH MORPHOLOGY

PA M:

With a peer, identify on a typodont the following teeth and surfaces within two minutes time limit. Pass will be with one error.

	SELF	PEER	INST	COMMENT
1. #4				
2. #8				
3. #12				
4. #23				
5. #32				
6. #5 B				
7. #11 L				
8. #14 L				
9. #29 M				
10. #21 L				
11. #10 Middle third of labial surface				
12. #13 Medsocervical third of lingual surface				
13. #19 Buccal pit				
14. #27 Incisal third on the lingual surface				
15. #28 Lingual cusp				
16. #30 Meciobuccal cusp				
17. Right cusp of carabelli				
18. Left distal cusp				
19. #20 Central groove				
20. #3 Lingual groove				
21. #30 Distobuccal groove				
22. Anterior teeth (max/man)				
23. Quadrant				
24. Mandibular incisors				
25. 6-year molars or 1st molars				
26. A.				
27. E & F				
28. S				
29. J mesial				
30. M lingual				
31. All posterior teeth. Primary dentition				
32. Max right quadrant. Primary dentition				
33. Primary mandibular anteriors				
34. #B mesial buccal cusp				
35. #O incisal edge				

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: TEMPORARY CROWNS AND RESTORATIONS

GOAL: To place and remove temporary restorations and crowns which will restore functional anatomy, provide protection and esthetics where required with maximum patient comfort and safety.

RATIONALE FOR LEARNING: Placing and removing temporary crowns and restorations is a common occurrence in dental practice. Proper background and clinical skills in temporary coverage is necessary to provide adequate protection for the patient. In addition, this skill is an expanded function as delegated by the Washington State Dental Practice Act.

PRE-REQUISITES:

ESTIMATED TIME FOR COMPLETION: Didactic: 3 hours
Lab: 6 hours

REFERENCES: Temporary Crown Restorations, 2nd Edition, Project ACCORDE Module 1, 2, 3; pages 3-116

Handbook of Clinical Dental Auxiliary Practice, Castano & Alden, 2nd Edition, 1980, pages 118-120

AUDIOVISUALS: Video Tapes, Quercus Corporation:
1. Aluminum Shell Crowns, 23 minutes
2. Preformed Plastic Crowns, 23 minutes
3. Custom Plastic Temporary Crowns, 42 minutes

BVTI Slide Series, Temporary Restorations

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Completion of LAP Objectives	
B. Research Vocabulary List	
C. Participate in Group Discussion, Objectives 1-12	
D. View Video Tape: "Aluminum Shell Crowns"	
E. Observe Lab Demo, Aluminum Shell Crowns	
F. Complete Lab Activity #1 meeting criteria listed	
G. Participate in Group Discussion, Objectives 13-17	

		Completion Date
H.	View Video Tape: "Preformed Plastic Crown"	
I.	Observe lab demo, Preformed Plastic Crown	
J.	Complete Lab Activity #2 meeting criteria listed	
K.	Participate in Group Discussion, Objectives 17-22	
L.	View Video Tape, "Custom Plastic Temporary Crown"	
M.	Observe lab demo, custom plastic temporary crown	
N.	Complete Lab Activity #3 meeting criteria listed	
O.	Participate in Group Discussion, Objectives 23 and 24	
P.	View BVTI Slide Series, "Temporary Restorations"	
Q.	Observe lab demo, Class 1 and 2 temporary restorations	
R.	Complete Lab Activity #4 meeting criteria listed	
S.	Exam: 90%	

LAP: TEMPORARY CROWNS AND RESTORATIONS

OBJECTIVES:

Module 1: Introduction to the Course
Module 2: Placing a Preformed Temporary Crown

1. List and describe the functions of temporary coverage, including rationale for each.
2. Explain the role of centric occlusion when preparing temporary coverage for a patient.
3. Describe clinical appearance of teeth when in centric occlusion (i.e., lingual. buccal cusps of bicuspids and molars).
4. Explain destructive processes that could result from improper occlusion (infraocclusion, drift, etc.).
5. Identify the functions of a gingival finish line.
6. List and describe changes that can occur in gingival tissue by improper fit of crown.
7. List and describe the types of temporary crowns available, including advantages and disadvantages of each.
8. Identify the criteria used when evaluating placement of a temporary crown.
9. Explain the errors allowable when evaluating a cemented temporary crown.
10. Describe the general steps of preparing a posterior temporary crown.
11. List and explain the function of each component of the armamentarium necessary to prepare a posterior temporary aluminum crown.
12. Explain the steps performed in the following phases of a temporary crown preparation (including criterion):

    a. preliminary procedures
    b. crown placement procedures

PRACTICE ACTIVITY C: Participate in group discussion, Objectives 1-12.

PRACTICE ACTIVITY D: Observe video tape, "Aluminum Shell Crowns".

PRACTICE ACTIVITY E: Observe lab demo, Aluminum Shell Crown.

PRACTICE ACTIVITY F: Complete Lab Activity #1 (aluminum crown) meeting criteria listed.

Module 3
Placing a Preformed Plastic Temporary Crown

13. Briefly explain appearance of an anterior crown prep (i.e., incisal, facial, lingual reduction).

14. Identify the two common patterns of centric occlusion for central incisors.

15. Describe the general steps of preparing an anterior temporary crown.

16. List and explain the function of each component of the armamentarium necessary to prepare an anterior temporary crown.

17. Explain the steps performed in the following phases of an anterior temporary crown preparation (including criterion):

    a. preliminary procedures
    b. crown placement procedures

PRACTICE ACTIVITY G: Participate in Group Discussion, Objectives 13-17

PRACTICE ACTIVITY H: View Video Tape: "Preformed Plastic Crown"

PRACTICE ACTIVITY I: Observe lab demo, Preformed Plastic Crown

PRACTICE ACTIVITY J: Complete lab activity #2 meeting criteria listed

Module 4: Placing a Custom Plastic Temporary Crown

18. Briefly explain appearance of a posterior crown prep (i.e., occlusal, lingual, proximal reduction).

19. Identify ideal occlusal contact points on posterior teeth.

20. Describe the general steps of preparing a posterior custom crown.

21. List and explain the function of each component of the armamentarium necessary to prepare a posterior custom crown.

22. Explain the steps performed in the following phases of a posterior custom crown preparation (including criterion):

    a. preliminary procedures
    b. crown placement procedures

PRACTICE ACTIVITY K: Participate in Group Discussion, Objectives 18-22

PRACTICE ACTIVITY L: View Video Tape "Custom Plastic Temporary Crown"

PRACTICE ACTIVITY M: Observe lab demo, Custom Plastic Temporary Crown

PRACTICE ACTIVITY N: Complete Lab Activity #3 meeting criteria listed.

Handbook of Clinical Dental Auxiliary Practice, pages 118-120

23. List and explain the function of each component of the armamentarium necessary to prepare and place a temporary restoration.

24. Explain the steps performed during preparation and placement of a class 1 and class 2 temporary restoration.

PRACTICE ACTIVITY O: Participate in Group Discussion, Objectives 23 and 24.

PRACTICE ACTIVITY P: View BVTI Slide Series, "Temporary Restorations"

PRACTICE ACTIVITY Q: Observe lab demo, class 1 and 2 temporary restorations.

PRACTICE ACTIVITY R: Complete Lab Activity #4 meeting criteria listed.

LAP: TEMPORARY CROWNS AND RESTORATIONS

PA B: VOCABULARY LIST

Directions: Research each word listed below using reference and text, Modern Dental Assisting, Torres and Ehrlich

1. anatomical
2. nonanatomical
3. bevel cut
4. chamber cut
5. feather cut
6. marginal seal
7. trim line
8. marginal ridge
9. centric markings
10. crimping
11. embrasure
12. polymerization
13. undercontour
14. preformed
15. polycarbonate

LAP: TEMPORARY CROWNS AND RESTORATIONS

PA F: LAB ACTIVITY #1
Aluminum Shell Crown

C = Criterion Met
I = Improvable
X = Criterion not met

Student's Name: _____

Date: _____

	Instructor's Evaluation				Self-Evaluation			
	Trial 1		Trial 2		Trial 1		Trial 2	
	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement
1. Crown contacts with the adjacent teeth:								
Distally	___	___	___	___	___	___	___	___
Mesially	___	___	___	___	___	___	___	___
2. Facial and lingual surfaces are in the same plane as the adjacent teeth.	___	___	___	___	___	___	___	___
3. Crown margin:								
Is at the finish line or up to 0.5mm occlusal to the finish line.	___	___	___	___	___	___	___	___
Fits snugly against the finish line.	___	___	___	___	___	___	___	___
4. Occlusion:								
Shows at least one centric mark on the crown that is the same intensity as those on the adjacent teeth.	___	___	___	___	___	___	___	___
Shows at least one centric mark on each tooth.	___	___	___	___	___	___	___	___
5. Crown surfaces are smooth.	___	___	___	___	___	___	___	___
6. Cementation:								
Crown margin is sealed with cement.	___	___	___	___	___	___	___	___
All excess cement has been removed.	___	___	___	___	___	___	___	___
7. Crown fitted and placed within time limit:								
Trial 1, 55 minutes		___				___		
Trial 2, 30 minutes				___				___

Explanation of Errors:

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LAP: TEMPORARY CROWNS AND RESTORATIONS

PA J: LAB ACTIVITY #2
Preformed Plastic Temporary Crowns

C = Criterion Met
I = Improvable
X = Criterion not met

Student's Name _____

Date _____

	Instructor's Evaluation				Self-Evaluation			
	Trial 1		Trial 2		Trial 1		Trial 2	
	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement
1. Crown contacts adjacent tooth:								
Mesially	___	___	___	___	___	___	___	___
Distally	___	___	___	___	___	___	___	___
2. Crown occlusion replicates that of the unprepared tooth.	___	___	___	___	___	___	___	___
3. Crown margin meets preparation.	___	___	___	___	___	___	___	___
4. Crown is the same length gingivoincisally as tooth #9/21.	___	___	___	___	___	___	___	___
5. Crown contour resembles that of tooth #9/21:								
Facially	___	___	___	___	___	___	___	___
Lingually	___	___	___	___	___	___	___	___
Interproximally, in gingival half	___	___	___	___	___	___	___	___
Incisally	___	___	___	___	___	___	___	___
6. All crown surfaces, except centric stops, margin, and interproximal contacts, are smooth and polished.	___	___	___	___	___	___	___	___
7. Restored tooth and surrounding area are free of excess cement and are clean and dry.	___	___	___	___	___	___	___	___
8. Crown margin is sealed.	___	___	___	___	___	___	___	___
9. Fitting and cementing procedures complete in								
60 minutes		___				___		
40 minutes				___				___

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LAP: TEMPORARY CROWNS AND RESTORATIONS

PA N LAB ACTIVITY #3
Custom Plastic Temporary Crowns

C = Criterion Met
I = Improvable
X = Criterion not met

Student's Name _____

Date _____

	Instructor's Evaluation				Self-Evaluation			
	Trial 1		Trial 2		Trial 1		Trial 2	
	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement	Before Cement	After Cement
1. Crown margin: Before cementation meets, contours to, and fits snugly against preparation finish line.	___	___	___	___	___	___	___	___
After cementation, at least 95% meets preparation finish line.	___	___	___	___	___	___	___	___
Entire margin is sealed.	___	___	___	___	___	___	___	___
2. Crown contacts adjacent teeth: Mesially.	___	___	___	___	___	___	___	___
Distally.	___	___	___	___	___	___	___	___
3. Crown contour: Replicates those of the unprepared tooth #14/26.	___	___	___	___	___	___	___	___
Aligned with those of the adjacent teeth.	___	___	___	___	___	___	___	___
4. Crown occlusion replicates that of unprepared tooth #14/26.	___	___	___	___	___	___	___	___
5. Crown is smooth and shiny.	___	___	___	___	___	___	___	___
6. Restored tooth is free of excess cement and is clean and dry.	___	___	___	___	___	___	___	___
7. Crown fabrication and cementing procedures completed in: 120 minutes (first trial).		___				___		
60 minutes (second trial).				___				___

Explanation of errors:

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LAP: TEMPORARY CROWNS AND RESTORATIONS

PA R: LAB ACTIVITY #4
Temporary Restorations

NAME _____

EVALUATION

TEMPORARY RESTORATIONS

Directions: Complete temporary restorations on a Class 1 and Class 2 prep meeting criteria listed:

C = criterion met

I = improveable

X = fail

	SELF EVALUATION		PEER EVALUATION		INSTRUCTOR EVALUATION	
	Cl 1	Cl 2	Cl 1	Cl 2	Cl 1	Cl 2
1. Proximal contacts						
2. Proximal contour						
3. Occlusion						
4. Margins sealed						
5. Smooth surface						
6. Excess cement removed						
7. Completed within fifteen minutes						

PEER _____

INSTRUCTOR _____

DATE _____

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: PEDODONTICS

GOAL: To effectively and efficiently modify chairside skills necessary to the unique needs of child patients.

RATIONALE FOR LEARNING: Treating children in general dental and pedodontic practices is a routine procedure. Proper judgment used with patient preparation and treatment is necessary if each child's needs are to be met.

ESTIMATED TIME FOR COMPLETION: Didactic: 4 hours
Lab: 0 hours

REFERENCES: Modern Dental Assisting, Torres and Ehrlich, 1980, pages 699-734.

AUDIOVISUALS:

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research LAP Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1-15	_____
D. Attend guest lecture, "Practice Management in Pedodontic Practice"	_____
E. Written Exam: 90%	_____

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LAP: PEDODONTICS

OBJECTIVES:

1. Identify the relationship between a pedodontist and general practitioner.

2. Describe the primary function of a pedodontist and pedodontic practice.

3. Describe the physical appearance of routine pedodontic offices (i.e, decor, operatory layout, reception area, etc.).

4. Identify the role of each dental auxiliary in a pedodontic office.

5. Explain the basis of subjective and objective fears of pedodontic patients, including preventive measures that may be employed.

6. List and describe the patient behaviors that may be present in each age bracket listed, including patient management techniques applicable:

   a. 2-3 years

   b. 4-6 years

   c. 7 years

   d. 8-14 years

   e. Adolescence - Teen Age

7. List and explain various parental behaviors, including effects on the child, and management techniques utilized.

8. Describe various methods for rewarding positive behaviors of a child patient.

9. List and explain the common diagnostic and preventive procedures performed on a pedodontic patient.

10. List and describe methods available and noted effect when utilizing pre and post medication with children.

11. Describe methods of pain control available in dentistry, including effectiveness level of each.

12. Identify restorative and base materials commonly used in pedodontic dentistry.

13. Explain the function and indications for use of a stainless steel crown.

14. Describe treatment techniques possible with fractured teeth (i.e., pulp cap, pulpotomy, pulpectomy, splinting).

15. Describe primary function and indications for a space maintainer and bite plane.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-15.

PRACTICE ACTIVITY D: Attend guest lectures session: "Patient Management in Pedodontics Practice"

LAP: PEDODONTICS

PA B: VOCABULARY LIST

Directions: Research each listed using text as a reference.

1. positive reinforcement
2. negative reinforcement
3. objective fear
4. subjective fear
5. saliva test

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE
DENTAL ASSISTANT PROGRAM

LAP: MONITOR NITROUS OXIDE AND OXYGEN

GOAL: To safely monitor NO_2O_2 to select patients, achieving a high degree of anxiety control and comfort which will encourage the patient to seek and accept dental treatment.

RATIONALE FOR LEARNING: Monitoring nitrous oxide is a frequent skill performed by a dental assistant in many, but not all dental offices. Proper judgment regarding nitrous oxide equipment maintenance, operation, precautions and emergency treatment is necessary when providing direct patient care.

PRE-REQUISITES:

ESTIMATED TIME FOR COMPLETION: Didactic: 3 hours
Lab: 2 hours

REFERENCES: Dental Anesthesia and Analgesia (Local and General), Allen, 3rd edition, 1984, pages 218-266.
Sedation, Hamburg, 1980.
Modern Dental Assisting, Torres and Ehrlich, 1981, pages 712-714.

AUDIOVISUALS: None.

REQUIREMENTS FOR COMPLETION:

		Completion Date
A.	Research LAP Objectives	_____
B.	Research Vocabulary List	_____
C.	Participate in Group Discussion, Objectives 1-11	_____
D.	NO_2O_2 Unit Identification	_____
E.	Participate in Group Discussion, Objectives 12-28	_____
F.	Observe instructor demo, NO_2O_2 Intro & Monitor	_____
G.	Clinic Eval, NO_2O_2	_____
H.	Exam, 90%	_____

LAP: MONITOR NITROUS OXIDE

OBJECTIVES:

Dental Anesthesia and Analgesia

Gases (ch. 8)
Equipment for Inhalation Analgesia (ch. 9)
Inhalation Analgesia (ch. 10)

1. Describe the physical properties of nitrous oxide and oxygen.

2. Explain the physiological action of nitrous oxide on the nervous system and respiratory system on both structural and tissue levels.

3. Briefly describe the early progress and development of nitrous oxide.

4. Explain the various stages of anesthesia and the signs and symptoms of each.

Dental Anesthesia and Analgesia

Inhalation Analgesia (ch. 10, page 264).

Modern Dental Assisting (pgs 712-714)

5. Describe the characteristics of a good analgesic.

6. Describe the factors which may modify or intensify the effects of nitrous oxide (age, sex, food, medications).

Dental Anesthesia and Analgesia

Equipment for Inhalation Anesthesia (ch. 9, page 253)

7. Briefly describe the various types of nitrous oxide machines on the market (portable, built-in).

8. Describe the characteristics of gas tanks, precautions for use under pressure, and proper storage.

Lecture

9 Describe the "fail safe" system found on some machines.

10. List the steps in preparation of the equipment for use.

11. Describe how to determine whether a tank is empty or full.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-11.

PRACTICE ACTIVITY D: Identify components of nitrous oxide Unit.

12. List the advantages and disadvantages of nitrous oxide when compared with oral and IV sedation drugs.

14. List the indications for the use of nitrous oxide (i.e., gagger, fearful patient, etc.).

15. Explain the contraindications for use of nitrous oxide (i.e., respiratory disease, etc.).

Dental Anesthesia and Analgesia

Inhalation Anesthesia (ch. 10, pgs. 255-263)

16. List the steps in administration of nitrous oxide.

17. Describe various techniques for introducing nitrous oxide to the patient (i.e., rapid vs. gradual induction, psychologic preparation, etc.).

18. Describe how to apply the face mask and cannulae for nitrous oxide administration.

19. Describe when a cannulae vs nasal inhaler should be used.

20. Explain rate and volume of nitrous oxide as it relates to patient safety.

21. Describe general procedures and precautions to observe when administering nitrous oxide (i.e., problem of leakage and contact lenses, etc.).

22. Explain how to determine concentration of nitrous oxide to administer to a patient.

23. List the absolute criteria for the safe administration of nitrous oxide.

24. Describe possible complications when administering nitrous oxide and the emergency procedures to be used.

25. List and describe patient behaviors which would alert the operator of a potentially dangerous situation relative to nitrous oxide administration.

26. Explain the information which should be presented to the patient regarding this procedure.

27. Explain information needed as a chart entry as related to this procedure.

28. Describe care and maintenance of nitrous oxide machines.

PRACTICE ACTIVITY E: Participate in Group Discussion,

PRACTICE ACTIVITY F: Observe instructor demo, NO_2O_2 Intro and Monitor

PRACTICE ACTIVITY G: Clinic Eval, NO_2O_2

LAP: MONITOR NITROUS OXIDE

PA B: VOCABULARY LIST

Directions: Research each listed below using references listed.

1. toxicity
2. contaminants
3. analgesia
4. anesthesia
5. flow meter
6. volume flow rate
7. fail safe
8. scavenging systems
9. amnesia
10. lethargy
11. auditory acuity
12. dissociation
13. combustion
14. volatile
15. vaporizers

LAP: MONITOR NITROUS OXIDE AND OXYGEN NAME _____

PA D: NO_2O_2 Unit Identification

Directions: Identify each listed on the NO_2O_2 Unit.
Pass is with 100% accuracy.

ITEM	SELF	PEER	INST
1. Oxygen tanks			
2. Nitrous oxide tanks			
3. Scavanger hose			
4. Oxygen gauge			
5. Nitrous oxide gauge			
6. NO_2O_2 flow meters			
7. Nosepiece			
8. NO_2O_2 unit on/off switch			
9. Bag			
10. Opening valve for each tank			

SCORE _____

PEER _____

INSTRUCTOR _____

DATE _____

Nitrous-Oxide/Oxygen Intro and Monitor

PA G: Evaluation

Directions: Completely set-up, prepare the patient, and administer and monitor NO_2O_2 to a peer/patient in a clinical setting meeting the following criteria with a minimum 90% level:

	SELF	PEER	INST
1. Assemble Armamentarium/Review Chart	____	____	____
2. Seat Patient	____	____	____
3. Intro Procedure to Patient	____	____	____
a. identify patients history with N_2O ("you've never had nitrous oxide before, is that right?")	____	____	____
b. identify "laughing gas" with nitrous ("have you ever heard of laughing gas?")	____	____	____
c. identify rationale for use ("nitrous helps to make you more relaxed; making your appointment much more comfortable")	____	____	____
d. explain short/long term effects ("the relaxed feeling will last only as long as the nitrous is being administered" - or - "you will feel back to normal soon after the nitrous mask is removed")	____	____	____
e. explain sensations felt by patient ("you may experience one or more of the following sensations: tingly fingers or toes, slightly heavy arms or legs, my voice may sound louder, also the lights on the ceiling may seem brighter. . . ")	____	____	____
f. alert the patient of the basic steps that will be happening ("first I will place this nosepiece on your nose, then I will have you breathe just oxygen for a few minutes, after you become comfortable with the nosepiece, then I will give you a small amount of nitrous. . . I will be checking with you frequently to evaluate how relaxed you are becoming. . . please try to breathe only through your nose and answer me with short answers when possible so the concentration is stable")	____	____	____
g. alert patient of how to communicate over-dosage ("if at any time you feel as though you are getting too deep, please alert me by raising your hand; also you can control the amount by breathing through your mouth . . continued mouth breathing will bring you back to normal")	____	____	____

	SELF	PEER	INST
4. Turn on Tanks	____	____	____
5. Fill bag properly with O_2; adjust flow to 6 litres O_2	____	____	____
6. Position nosepiece with patient's assistance	____	____	____
7. Provide 2x2 under nosepiece if needed	____	____	____
8. Advise patient to breathe oxygen normally	____	____	____
9. After 1-2 minutes, alert patient you are turning nitrous on	____	____	____
10. Turn nitrous to 2, oxygen to 4	____	____	____
11. After approximately 2 minutes, verbally check patient's reactions	____	____	____
12. Alert dentist you are ready/perform operative	____	____	____
13. After treatment, turn off nitrous, flush patient's system with 6 litres oxygen for approximately 2-3 minutes	____	____	____
14. Dismiss patient, produce accurate chart entry	____	____	____

DATE _____

INSTRUCTOR _____ PASS _____

STUDENT _____ RETAKE _____

BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: IDENTIFY AND INTERPRET RADIOGRAPHS FOR MOUNTING

GOAL: To gain skills in identification of anatomical landmarks of radiographs for mounting and interpretation using background knowledge of anatomy skills.

RATIONALE FOR LEARNING: Intraoral radiographs must be mounted in an accurate manner in order to correctly diagnose. Incorrect mounting could result in unnecessary dental treatment.

PRE-REQUISITE: Head and Neck Anatomy Block 1,2,3.

REFERENCES: Essentials of Radiographs for Assistants and Hygienists, deLyre, 1980 Chapter 9, pages 133-164.

AUDIOVISUALS: Mounting X-Rays, Hoffman Series, 4.9
Mounting Radiographs, Slide Series, B.V.T.I.

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research of LAP Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1-7.	_____

LAP: RADIOLOGY: IDENTIFY AND INTERPRET RADIOGRAPHS FOR MOUNTING

REQUIREMENTS FOR COMPLETION:

		Completion Date
D.	View B.V.T.I. slide series and identify alveolar process, tooth structures and injuries to structures.	_____
E.	Participation in Group Discussion, Objectives 8 and 9.	_____
F.	View B.V.T.I. slide series and identify radiopaque and radiolucent on maxillary and mandibular structures.	_____
G.	View filmstrip and tape: Mounting Radiographs, 4.5	_____
H.	Participate in Group Discussion, Objectives 11-23.	_____
I.	View B.V.T.I. slide series, and identify types of restorations, cement bases, calculus, caries, abscesses, perio disease and bone resorption.	_____
J.	Observe an instructor demo on mounting a full mouth series.	_____
K.	Mount 20 full mouth series with no errors, including peer and instructor evaluation.	_____
L.	Pass quiz on slide series by viewing each slide and identifying proper location of film in 5 seconds with 100% accuracy.	_____
M.	Mount 10 full mouth series with a 4 minute time limit with 100% accuracy, mounting each in 4 minutes.	_____

LAP: RADIOLOGY: IDENTIFY AND INTERPRET RADIOGRAPHS FOR MOUNTING

OBJECTIVES:

1. Identify the difference between interpretation and diagnosis of a radiograph.

2. Describe the role of a dental auxiliary during evaluation of a radiograph.

3. List and identify on radiographs the structures present on the maxillae and mandible.

4. Describe the classifications of bone (cortical, trabecular, trabeculae).

5. List, describe and identify the alveolar process and its composition (lamina dura, supporting bone, periodontal ligament) on radiographs.

6. List, describe and identify the tooth structures (enamel, dentin, cementum, pulp, apical foramen) on radiographs.

7. List and describe existing conditions that may change the radiographic appearance of tooth structures.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-7.

PRACTICE ACTIVITY D: View B.V.T.I. slide series, identifying the alveolar process and its composition, tooth structures and injuries to tooth structures (decay, bone loss, abscess, etc.)

8. Define radiopaque/radiolucent and list/identify examples of each.

9. Define radiopaque/radiolucent and list/identify examples of each on maxillary and mandibular structures.

10. List steps performed when mounting a full mouth x-ray.

PRACTICE ACTIVITY E: Participate in Group Discussion, Objectives 8 and 9.

PRACTICE ACTIVITY F: View B.V.T.I. slide series, identifying radiopaque and radiolucent on sample maxillary and mandibular structures.

PRACTICE ACTIVITY G: View filmstrip and tape: Mounting Radiographs, 4.5

11. Briefly describe a series of tooth characteristics and bone structures viewed to make mounting easier.

12. Describe how films may be viewed for diagnosis.

13. Describe how differentiation on a radiograph is made between:
    a. amalgam and cast gold restoration
    b. porcelain, silicate and acrylic resin restoration
    c. whether a restoration is existing on the buccal or lingual

14. List 5 radiolucent filling materials/cements.

15. List 5 radiopaque filling materials/cements.

16. Define and explain how hypercementosis, exostosis and calculus appears on radiographs.

17. List and describe radiographic appearance of the 3 types of dental caries found on radiographs.

18. List and describe the radiolucent areas surrounding the apices of teeth that may be found on a radiograph.

19. Describe how periodontal disease may be viewed on a radiograph.

20. Briefly explain definition, cause of and appearance on radiograph of an "eruption cyst".

21. Describe how fracture lines may be identified in a radiograph.

22. Identify and explain the two types of resorption.

23. Describe how x-rays are stored.

PRACTICE ACTIVITY H: Participate in Group Discussion, Objectives 11-23.

PRACTICE ACTIVITY I: View B.V.T.I. slide series, and identify types of restorations, cement bases, calculus, caries, abscesses, perio disease and bone resorption.

PRACTICE ACTIVITY J: Observe an instructor demo on mounting a full mouth series.

PRACTICE ACTIVITY K: Mount 20 full mouth series with no errors (criteria attached.)

PRACTICE ACTIVITY L: Pass a quiz on slide series by viewing each slide and identifying proper location of film in 5 seconds with 100% accuracy (criteria attached).

PRACTICE ACTIVITY M: Mount 10 full mouth series with a 4 minute time limit and no errors (criteria attached).

LAP: RADIOLOGY: IDENTIFY AND INTERPRET RADIOGRAPHS FOR MOUNTING

PA B: VOCABULARY LIST

Directions: Research each listed below using text, Essentials of Radiography for Assistants and Hygienists, deLyre. Record definition and routine location where applicable.

1. abscess
2. acoustic meatus
3. ala
4. anodontia
5. cancellous bone
6. cervical burnout
7. condensing osteitis
8. fossa
9. genial tubercles
10. identification dot
11. impacted tooth
12. lingual foramen
13. radicular cyst
14. rarefying osteitis
15. resorption
16. sclerosis
17. septum
18. sinus
19. submandibular fossa
20. symphysis
21. maxillary tuberosity
22. mandibular canal

BELLINGHAM VOCATIONAL-TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

Radiography
Identify/Interpret for Mounting
KSchacht

Supplemental Activity A K
Mounting Exercise

Directions: Mount each of the listed fmx with 100% accuracy. Have 1 peer and instructor - or- 2 peers evaluate accuracy and sign below. Turn in when completed. Please utilize paper liner during mounting.

Pt. Name	Peer	Instructor
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

BELLINGHAM VOCATIONAL-TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

Radiography
Identify/Interpret Radiographs for Mounting
KSchacht

Name_____

Supplemental Activity 5 L
Mounting Quiz

Directions: Each slide will be projected for 5 seconds and turned off. Record location of film using abbreviations (i.e., URM, LLBI, LLC, ULC, etc.). Continued attempts will be made until reaching 100% accuracy.

1._____
2._____
3._____
4._____
5._____
6._____
7._____
8._____
9._____
10._____
11._____
12._____
13._____
14._____
15._____
16._____
17._____
18._____
19._____
20._____
21._____
22._____
23._____
24._____
25._____
26._____
27._____
28._____
29._____
30._____
31._____
32._____
33._____
34._____
35._____

BELLINGHAM VOCATIONAL-TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

Radiograph
Identify/Interpret for Mounting
KSchacht

Name_____

Supplemental Activity 5M
Mounting Timing

Directions: Mount each fmx in a maximum 4 minutes with 100% accuracy. If the first three series are mounted within time limit without error, no further evaluation is necessary. Otherwise, all ten series are evaluated.

	Time	SE	IE
FMX 1			
FMX 2			
FMX 3			
FMX 4			
FMX 5			
FMX 6			
FMX 7			
FMX 8			
FMX 9			
FMX 10			

BELLINGHAM VOCATIONAL-TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

GOAL: To become familiar with the types of dental x-ray film packets, in addition to the concepts of the bisecting and paralleling exposure techniques, and advantages, disadvantages, indications and contraindications of each.

RATIONAL FOR LEARNING: Exposing radiographs on dental patients is a routine skill performed by a dental assistant. Proper judgement regarding type of film and technique used is necessary to prevent occurrence of retakes resulting in overexposure.

PRE-REQUISITES: Blocks 1,2,3

ESTIMATED TIME FOR COMPLETION: Didactic: 3 hours
Lab: 2 hours

REFERENCES: Essentials of Radiographs for Assistants & Hygienists, deLyre, 1980 Chapter 7 & 11, pgs. 89-104 and 183-207.
X-Rays in Dentistry, Eastmen Kodak, 1977, pgs. 16-58

AUDIOVISUALS: X-Ray Film and Cone Placement, Hoffman Series, 4.5
IntraOral Radiographic Procedures, Slide Series, BVTI

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research of Lap Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1-7	_____
D. Participate in Group Discussion, Objectives 8-22	_____
E. View filmstrip and tape: X-Ray Film and Cone Placement, 4.5	_____
F. Participate in Group Discussion, Objectives 23 & 24.	_____
G. View BVTI Slide Series, IntraOral Radiographic Procedures	_____
H. Participate in Group Discussion, Objectives 25-28	_____

LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

REQUIREMENTS FOR COMPLETION:	Completion Date
I. Peer Evaluation "Introduction of Procedure to Patient"	_____
J. XCP Load Timing	_____

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LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

OBJECTIVES:

Dental X-Rays Films

1. Explain the composition of dental x-ray films (base, emulsion, sensitivity).
2. Explain the film covering and packaging for dental x-ray films (contents and function of each, tube side and back side, bulk packaging).
3. Describe the factors that determine film speed, image definition, and the ratings given to identify speed of film.
4. Identify the types of dental x-ray films available including the function of each (intraoral and extraoral).
5. Describe the classification of screened and nonscreened film, including rationale for use of each.
6. Explain extraoral holder and cassettes (physical appearance), including rationale for addition of intensifying screens to cassettes.
7. Identify proper film storage and protection necessary in a dental office environment.

PRACTICE ACTIVITY C: Participate in group discussion, Objectives 1-7.

IntraOral Radiographic Procedures

8. List and explain the 3 types of intraoral radiographic exams.
9. List the alternate names given for the bisecting and paralleling techniques.
10. Briefly state the theory on which both techniques are based.
11. Explain the concept of the bisecting technique as related to Ciezynski's law.
12. Explain the advantages and disadvantages of the bisecting technique.
13. Explain the concept/principles of the paralleling technique.
14. Describe the advantages and disadvantages of the paralleling technique.
15. List ways a film can be stabelized in the paralleling and bisecting technique.
16. Describe the effects of quality of film when increasing the target-film distance with bisecting (using a long cone to bisect) and decreasing the target-film distance with paralleling (using a short cone to parallel).
17. Describe film placement with bisecting and paralleling technique.

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LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

18. Explain what must be performed to maintain intensity of the film once the target-film distance is increased.

19. Briefly list and describe several predetermined head/body positions necessary to use as a beginner during exposure.

20. Briefly define horizontal and vertical angulation.

21. Summarize how vertaical angulation is described in degrees and how the patient must be positioned in order for this technique of angulation to work effectively.

22. State the vertical angulation degrees guide used when exposing a film with the bisecting technique.

PRACTICE ACTIVITY D: Participate in Group Discussion, Objectives 8-22.

PRACTICE ACTIVITY E: View filmstrip and tape: X-Ray Film and Cone Placement, 4.5

23. List anatomical features which may alter use of a "degree chart."

24. Define what is accomplished with excessive angulation and insufficient angulation.

PRACTICE ACTIVITY F: Participate in Group Discussion, Objectives 23 & 24.

PRACTICE ACTIVITY G: View BVTI Slide Series, IntraOral Radiographic Procedures

25. Explain information presented to the patient regarding this procedure.

26. List steps taken to physically prepare the patient prior to exposure.

27. List and describe ways to alleviate triggering a gag reflex in a patient.

28. Explain when and how to sanitize the x-ray equipment room after treatment.

PRACTICE ACTIVITY H: Participate in Group Discussion, Objectives 25-28.

PRACTICE ACTIVITY I: Pair up with a peer. Using format attached, introduce the patient to the procedure meeting criteria listed.

PRACTICE ACTIVITY J: Prepare the XCP film holder for areas listed meeting criteria attached.

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LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

PA B: VOCABULARY LIST

Directions: Research each listed below using text Essentials of Dental Radiography for Assistants and Hygienists, deLyre.

1. cassette
2. duplicating film
3. intensifying screens
4. latent image
5. nonscreen film
6. occlusal radiographs
7. periapical radiographs
8. adumbration
9. bisector
10. point of entry

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LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

PA I: INTRODUCTION OF PROCEDURE TO PATIENT

Directions: Team up with a peer in two situations. Using the dialogue below as a guide, physically/psychologically prepare the patient for the procedure. Your patient will be checking off the areas you cover below, then signing. Your patient is also encouraged to give input as desired; however, try to make the activity as realistic as possible.

_____1. Seat patient/establish rapport.

_____2. Physically prepare patient (i.e., lead shield, oral inspection, attend to patient's special needs, etc.).

_____3. Introduce procedure to patient:

_____a. "I am going to take x-rays on you today. Have you ever had x-rays taken in your mouth before? Well, I will be taking 18 single films: 14 to show the corwns, roots and surrounding bone of each area, and 4 to show crowns and possible cavities in-between teeth. It will take 20 - 30 minutes."

_____b. "I'm laying a lead shield on you to give you extra protection, even though the radiation level is very low with these exposures."

_____c. "I will be suing this film holder to stabelize the films during exposure. The only thing you need to do is to bite where and when I ask you to, and to hold as still as possible."

_____d. "Tenderness with holding the film holder in place is not unusual. However, I will do everything I can to make you as comfortable as possible."

Patient #1 ____ _____ Date_____

Patient #2 _____ Date_____

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LAP: RADIOLOGY: INTRAORAL RADIOGRAPHIC PROCEDURES

PA J: XCP LOAD TIMING

Directions: Using an XCP tray, prepare the appropriate film holder and load the film with 100% accuracy (including dot to occlusal) for each area listed in 10 seconds. Timing begins after the tooth number has been stated. Film holders must be dis-assembled prior to direction/timing.

	Peer	Instructor
1. #14	_____	_____
2. #30	_____	_____
3. #8	_____	_____
4. #5	_____	_____
5. #13	_____	_____
6. #18	_____	_____
7. #27	_____	_____
8. #29	_____	_____
9. #22	_____	_____
10. #3	_____	_____

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BELLINGHAM VOCATIONAL TECHNICAL INSTITUTE

DENTAL ASSISTANT PROGRAM

LAP: RADIOLOGY: THE PERIAPICAL AND BITEWING EXAMINATION

GOAL: To effectively and efficiently prepare and position the patient and film/film holder to produce a full-mouth series of radiographs with maximum patient comfort and safety and minimum errors.

RATIONALE FOR LEARNING: Placing and exposing x-rays on dental patients is a routine skill performed by a dental assistant. Proper judgment used with patient preparation, film placement and correct angulation is necessary to prevent excessive radiation. In addition, acceptable clinical skills are necessary with both the bisecting and paralleling exposure techniques, since both are widely used.

ESTIMATED TIME FOR COMPLETION: Didactic: 4 hours
Lab: 15 hours

REFERENCES:
Essentials of Radiographs for Assistants and Hygienists, deLyre, 1980, Chapters 12 and 13, pages 208-248
X-Rays in Dentistry, Eastman Kodak, 1977, pages
Oral Radiology - Principles and Interpretation, Goaz and White, 1982, Chapter 11, pages 178-244
Dental Radiology, Wuehrmann and Manson-Hing, 1981, Chapter 5, pages 95-132

AUDIOVISUALS: Use of X-tension C-one P-aralleling Instruments, Health Sciences Communications Center

REQUIREMENTS FOR COMPLETION:

	Completion Date
A. Research of LAP Objectives	_____
B. Research Vocabulary List	_____
C. Participate in Group Discussion, Objectives 1 - 9	_____
D. View film stabelization methods	_____
E. Participate in Group Discussion, Objectives 10 & 11	_____
F. View video tape, "Use of X-tension C-one P-aralleling Instruments.	_____
G. Participate in Group Discussion, Objectives 12-15	_____

		Completion Date
H.	Observe a clinic demo on the manikin using the paralleling technique, maxillary only	_____
I.	Expose the maxillary on DXTR manikin	_____
J.	When pa G is complete, observe parallel demo on DXTR 3 manikin for mandibular only	_____
K.	Expose the mandibular on DXTR 3 manikin	_____
L.	Participate in group discussion, Objectives 16-19	_____
M.	Observe clinical demo on the manikin	_____
N.	Expose BWS on clinic manikin	_____
O.	Expose XCP FMX #2	_____
P.	Expose XCP FMX #3	_____
Q.	Observe demo, Bisect max and mand	_____
R.	Expose Bisect #1	_____
S.	Expose Bisect #2	_____
T.	Expose Bisect #3	_____
U.	Exam, 90%	_____

LAP: RADIOLOGY: THE PERIAPICAL AND BITEWING EXAMINATIONS

OBJECTIVES:

1. Describe film size that may be used when exposing a full-mouth series.

2. State the number of x-rays necessary in a full mouth series.

3. State the direction films are placed for anterior/posterior shots (i.e., vertical/horizontal).

4. State the size of margin of film that is allowed to protrude above and below the incisal/occlusal edge.

5. State the position of the "film identification dot" when placing film.

6. Describe what action can be employed to make film placement/patient acceptance easier.

7. Describe a technique useful in minimizing bending of the film packet.

8. Explain proper sequence of film positioning when exposing a full mouth survey.

9. Identify methods available to stabelize film in the mouth proir to exposure with the bisecting and paralleling techniques.

PRACTICE ACTIVITY C: Participate in Group Discussion, Objectives 1-9.

PRACTICE ACTIVITY D: View the film stabelization methods used in B.V.T.I. Campus Clinic with bisect and parallel techniques.

10. Explain proper patient/film placement and angulation for the bisecting technique with each area listed:
    a. max/mand molar
    b. max/mand bicuspid
    c. max/mand cuspid
    d. max/mand central

11. Explain proper patient/film placement and angulation for the paralleling technique with each area listed:
    a. max/mand molar
    b. max/mand bicuspid
    c. max/mand cuspid
    d. max/mand central

PRACTICE ACTIVITY E: Participate in Group Discussion, Objectives 10 and 11.

PRACTICE ACTIVITY F: View video tape, "Use of X-tension C-one P-aralleling Instruments.

12. State the variations that may arise when exposing maxillary molars and the techniques used.

13. Explain the components of the armamentarium nexessary to perform this procedure.

14. Explain the maintenance of the treatment area and each component of the armamentarium as related to this procedure.

15. Explain the information required as a chart entry as related to this procedure.

PRACTICE ACTIVITY G: Participate in group discussion, Objectives 12-15.

PRACTICE ACTIVITY H: Observe a clinic demo on the manikin using the paralleling technique, maxillary only.

PRACTICE ACTIVITY I: Expose the maxillary ou DXTR 3 manikin using the paralleling technique. After processing, evaluate, the submit to the instructor.

PRACTICE ACTIVITY J: When pa G is complete, observe parallel demo on DXTR 3 manikin for mandibular only.

PRACTICE ACTIVITY K: Expose the mandibular on DXTR 3 manikin using the paralleling technique, after processing, evaluate, then submit to the instructor.

The Bitewing Examination

16. Explain the rationale for exposing bitewing radiographs, including frequency and advantages of this technique over periapicals.

17. Identify cone length utilized with the bitewing exposures, including rationale for response.

18. Explain film and cone placement for a bicuspid and molar bitewing exposure.

19. Describe various film retention techniques utilized with a bitewing examination.

PRACTICE ACTIVITY L: Participate in group discussion, Objectives 16-19.

PRACTICE ACTIVITY M: Observe clinical demo on the manikin, exposing molar and bicuspid bitewings.

PRACTICE ACTIVITY N: When all max and mand pas are evaluated, expose, process and evaluate 4 bitewings and submit for evaluation.

PRACTICE ACTIVITY O: After XCP #1 is complete, progress to, and complete XCP #2. Submit for evaluation.

PRACTICE ACTIVITY P: Expose XCP #3 in 30 minutes meeting evaluation criteria.

PRACTICE ACTIVITY Q: Observe Bisect demo, maxillary and mandibular on clinic manikin.

PRACTICE ACTIVITY R: Expose Bisect #1 and submit for evaluation.

PRACTICE ACTIVITY S: Expose Bisect #2 and submit for evaluation.

PRACTICE ACTIVITY T: Expose Bisect #3 in 30 minutes meeting evaluation criteria.

PRACTICE ACTIVITY U: Exam, 90%.

LAP: RADIOLOGY: THE PERIAPICAL AND BITEWING EXAMINATIONS

PA B: VOCABULARY LIST

Directions: Research each listed using text, Essentials of Radiography for Assistants and Hygienists, deLyre.

1. bisector
2. central (ray) beam
3. film holder
4. mean target
5. occlusal plane
6. periapical radiograph
7. point of entry
8. vertical placement
9. bitetab
10. contact area
11. embrasure
12. overlapping